

[CLAIMS]

1. A process for the preparation of a nanoparticle dispersion of an optionally doped metal chalcogenide, comprising the steps of
(a) performing a precipitation by mixing together appropriate aqueous solutions of metal cations, of chalcogenide anions, and optionally of a salt of the dopant respectively, thus forming a predisper-
sion,
(b) performing a diafiltration and/or ultrafiltration washing step on said predisper-
sion, characterized in that said step is performed in the presence of a compound capable of preventing agglomeration of the nanoparticles of the dispersion.
2. A process according to claim 1 wherein said optionally doped metal chalcogenide is chosen from the group consisting of ZnS, ZnSe CdS, CdSe, doped ZnS, doped ZnSe, doped CdS and doped CdSe.
3. A process according to claim 2 wherein said metal chalcogenide is ZnS doped with Mn^{2+} or Cu^{+} ions.
4. A process according to claim 1 wherein said precipitation step is performed according to the double jet principle whereby a first solution containing said metal ions and optionally said dopant salt, and a second solution containing said chalcogenide anions are added simultaneously to a third solution.
5. A process according to claim 1 wherein said compound preventing agglomeration of the nanoparticles of the dispersion is thioglycerol.
6. A process according to claim 1 wherein said compound preventing agglomeration of the nanoparticles of the dispersion is glycerol.
7. A process according to claim 1 wherein said compound preventing agglomeration of the nanoparticles of the dispersion is a polyphosphate or polyphosphoric acid.

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8. A process according to claim 1 wherein said compound preventing agglomeration of the nanoparticles of the dispersion is a hexametaphosphate.

204210-10125001